

IN THE CLAIMS

1. A carboneous fuel containing triemethoxymethylsilane. .

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2. A carboneous fuel containing a combustion catalyst selected from the group of triemethoxymethylsilane, dimethylphosphite, ethoxytrimethylsilane, isobutyltriethoxysilane, tetramethylsilane, dimethoxy-methyl-vinyl-silane, methyltriethoxysilane, 3-aminopropyl-triethoxysilane, 3-aminopropyl-trimethoxysilane, vinyltrimethoxysilane, diethoxydi-methylsilane, dimethoxydimethylsilane, vinyltris(2-butyldenamino-oxy)silane, tetraalkyloxysilanes, tetramethoxysilane, tetraethoxysilane, tetrapropoxysilane, tetraisopropylsilane, tetraisobutylsilane, a dialkylphosphites, dimethyl-phosphite, diethylphosphite, dipropylphosphite, dibutylphosphite, di-tert-butylphosphite, trialkylphosphites, trimethylphosphite, triethylphosphite, tripropylphosphite, triisopropylphosphite, tributyl-phosphite), dimethylmethylphosphonate, diethylmethyl-phosphonate, P-pyrophosphate, trimethyl-orthoacetate, trimethylorthovalerate, trimethylorthobutyrate, trimethylortho-formate, alkyloxymethanes, tetraalkyloxymethanes, tetramethoxymethane, tetraethoxymethane, tetrapropoxymethane, tetraisopropoxymethane, tetratert-butoxy-methane, potassium pyrophosphite, trimethylorthoacetate, triethylorthoacetate, trimethylorthobutyrate, triethylortho-butyrate, trimethylorthovalerate, trimethylorthoformate, dimethoxymethane, diethoxyethane, tetramethoxymethane, triethoxymethylmethane, tri-methoxymethylmethane, tetraethoxymethane, trimethoxymethylethane, triethoxymethylethane, glacial acetic acid, acetic acid anhydride, (acetyloxy) acetic acid, ethyl ester (acetyloxy) acetic acid, aminooxo acetic acid, aminooxo acetic acid hydrazide, ammonium acetate, acetoacetic acid, methoxyacetic acid, ethoxyacetic acid, methoxy ethyl ester of acetic acid, methoxy methyl ester of acetic acid, ethoxy methyl ester of acetic acid, propoxy methyl ester of acetic acid, oxoacetic acid, an alkylhydroxyesters of acetic acid, methylesterhydro-xyacetic acid, ethylesterhydroxy-acetic acid, propylesterhydro-xyacetic acid, alkyl acetates, methyl ester acetic acid, ethyl arsenate, ethyl arsenite, methyl ester of butanic acid, ethyl ester of butanic acid, 2-hydroxybutanic acid, 3-hydroxybutanic acid, 3-hydroxy-ethylester of butanic acid, 2-hydroxyethylester of butanic acid, diphenyl carbonate, dipropyl carbonate, ethylmethyl carbonate, dibutyl carbonate, tetranitromethane,

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triethylphosphine oxide, triethylphosphine oxide,
 triethylphosphine, diethyl-phosphinic acid,
 dimethylphosphinic acid, ethyl diethylphosphinic acid,
 diethylphosphonic chloride, dibutyl ester phosphonic acid,
 5 (1,1-dimethylethyl) phosphonic acid, ethenyl diethyl ester
 phosphoric acid, diethyl ethylphosphonate, ethyl
 dimethylester phosphonic acid, methyl dimethylester
 phosphonic acid, methyl monoethylester phosphonic acid,
 10 methyl monomethylester phosphonic acid, methyl-O,O-
 dimethylester phosphonothioic acid, diethyl ester phosphoric
 acid, dimethyl ester phosphoric acid, tributyl phosphate,
 ethylphosphate, trimethyl ester ester phosphoric acid,
 triethyl ester ester phosphoric acid, tripropyl phosphate,
 15 O,O,O,-triethyl ester phosphorothioic acid, diethylester
 phosphorous acid, dimethylester phosphorous acid, tributyl
 ester phosphorous acid, triphenyl ester phosphorous acid,
 O,O,S-tiethyl ester phosphorodithioic acid, 2-methyl-
 1,2,propanediol, 2-methyl-2-nitro-1,3,-propanediol, 2-
 methyl-2-propyl-1,3,-propanediol, 1-nitrate-1,2,propanediol,
 20 1,1',1'',1'''-[methanetetrayltetrakis(oxy)]-tetrakis propane,
 methyl propyl ether, isopropylmethyl ether, isobutyl methyl
 ether, ethyl propyl ether, propylmethyl ether, butyl methyl
 ether, 1,1'-[methylenebis(oxy)]bis[2-methyl-propane, 1-(1-
 methylethoxy)-propane, 2,2',2''-[methylidyne-tris(oxy)]tris
 25 propane, 1,1',1''-[methylidynetris(oxy)]tris[2-methyl
 propane, 2-methyl-1-nitro propane, 2-methyl-2-nitro propane,
 hydracrylonitrile, 1,1,1-triethoxy-propane, 1,1,3-triethoxy-
 propane, 1,1,1-trimethoxy-propane, 1,1,3-trimethoxy-propane,
 1,1,1-trifluoro-3-nitro-propane, 2-pyrrolidinone, phenol,
 30 and mixture.

3. The composition of claim 2, wherein the
 combustion catalyst is selected from group consisting of
 trimethoxymethylsilane, ethoxytrimethylsilane,
 35 isobutyltriethoxysilane, tetramethylsilane, dimethoxy-
 methyl-vinyl-silane, methyltriethoxysilane, 3-aminopropyl-
 triethoxysilane, 3-aminopropyl-trimethoxysilane,
 vinyltrimethoxysilane, diethoxydimethylsilane, di-
 methoxydimethylsilane, vinyltris(2-butylidenaminooxy)silane,
 40 tetramethoxysilane, tetraethoxysilane, tetrapropylloxysilane,
 tetraisopropylsilane, tetraisobutylsilane,
 dimethylphosphite, dipropylphosphite, diethylphosphite,
 dibutylphosphite, di-tert-butylphosphite, trialkylphosphites
 trimethylphosphite, triethylphosphite,
 45 triisopropylphosphite, tributylphosphite), dimethyl-
 methylphosphonate, diethylmethylphosphonate, potassium pry-
 ophosphite, trimethylorthoacetate, triethylorthoacetate, tri-
 methylorthobutyrate, triethylorthobutyrate, tri-

methylorthovalerate, trimethylorthoformate, including homologues, analogues, isomers, derivatives, and mixture thereof.

- 5 4. The composition of claim 3, wherein the catalyst
is selected from group consisting of trimethoxymethylsilane,
dimethylphosphite, diethylphosphite, tetramethoxymethane,
10 tetraethoxymethane, trimethoxymethylmethane,
triethoxymethylmethane, methoxy methyl ester of acetic acid,
tetranitromethane, and mixture.
5. The composition of claim 2, wherein said
carbaceous fuel is a hydrocarbon fuel.
- 15 6. The composition of claim 2, wherein said
carbaceous fuel is an Enhanced Combustion Structure ("ECS")
compound having a latent heat of vaporization (LHV) equal
to or greater 21 kJ mol^{-1} at its boiling temperature, and
20 a minimum burning velocity (as measured by laminar Bunsen
flame) of 40 cm/sec ("BV"), C2 - C12 aldehydes, aldehydic
acids, C2 - C12 ethers, ether acids, C3 to C15 di-ethers, C1
- C15 alcohols, C2 - C12 oxides, C3 - C15 ketones, ketonic
acids, C3 - C15 esters, alkyl formates, acetates,
25 diacetates, butyrates, orthoesters, C3 - C12 diesters, C5 -
C12 phenols, C3 - C20 glycol ethers, C2 - C12 glycols,
glycol ethers, C3 - C20 alkyl carbonates, C3 - C20 dialkyl
carbonates, C3 - C20 asymmetrical alkyl/dialkyl carbonates,
30 C3 - C20 di-carbonates, C1 to C20 organic and inorganic
peroxides, hydroperoxides, carboxylic acids, amines,
nitrates, di-nitrates, oxalates, phenols, glacial acetic
acids, C3 to C8 hydroxy esters of acetic acid, anhydrides,
methoxy methyl ester of acetic acid, boric acids,
orthoborates, hydroxyacids, orthoacids, anhydrides,
35 acetates, acetyls, methyl esters, nitrates, di-nitrates,
nitro-ethers, aldehydic acids, anhydrides, carbonic esters,
carboxylic acids, esters, di-esters, ethers, di-ethers,
formic acids, hydroxyacids, ketones, ketonic acids,
nitrates, alkyl/cyclo/cycloalkyl/aryl nitrates,
40 nitromethane, nitroethane, nitropropane, di-nitrates,
amines, anilines, amides, hydrazines, nitrosyls, imides,
methylamines, xylidine, 2,3-xylidine, ammonia,
orthoborates, orthoesters, orthoacids, oxides, oxalates,
oxalic acids, peroxides, hydroperoxides, and phenols, said
45 compound optionally containing at least one substituent
selected from alkyl, alkyloxy, dialkyl, dialkyloxy,
polyalkyl, polyalkyloxy, aryl, amide, acetate, aldehyde,

carboethoxy, carbomethoxy, carbonyl, carbonyldioxy, carboxy, ethoxalyl, ethoxy, formyl, glycolyl, glyoxylyl, hydroxyl, imide, methoxy, or methylenedioxy, nitrosyl radical, and mixtures thereof.

- 5 7. The composition of claim 7, wherein said ECS
oxygenate is selected from the group consisting of methyl
tertiary butyl ethers, ethyl tertiary butyl ether, tertiary
methyl amyl ether, tertiary methyl ethyl ether, ethyl
10 tertiary amyl ether, dimethyl ether, DIPE, methyl ester, C1
to C6 aliphatic alcohols, dimethyl carbonate, diethyl
carbonate, methylal, ethylal, and mixture.
- 15 8. The composition of claim 2, wherein said fuel
contains at least one non-leaded element or derivative
organic or inorganic compound (NLEC") containing said non-
lead element, selected from the group consisting of 1A, 2A,
3B, 4B, 5B, 6B, 7B, 8, 1B, 2B, 3A, 4A, 5A, 6A, or 7A
20 elements of the Periodic Chart of Elements (CAS version),
and mixture, wherein said element or derivative compound, is
combustible and optionally has a minimum heating value of
4,000 Kcal/kg.
- 25 9. The composition of claim 8, wherein said NLEC is
a combustible element or compound containing at least one
element selected from the group consisting of aluminum,
boron, bromine, bismuth, beryllium, calcium, cesium,
chromium, cobalt, copper, francium, gallium, germanium,
iodine, iron, indium, lithium, magnesium, manganese,
30 molybdenum, nickel, niobium, phosphorus, potassium,
palladium, rubidium, sodium, tin, zinc, praseodymium,
rhenium, silicon, vanadium, strontium, barium, radium,
scandium, yttrium, lanthanum, actinium, cerium, thorium,
titanium, zirconium, hafium, praseodymium, protactinium,
tantalum, neodymium, uranium, tungsten, promethium,
35 neptunium, samarium, plutonium, ruthenium, osmium, europium,
americium, rhodium, iridium, gadolinium, curium, platinum,
terbium, berkelium, silver, gold, dysprosium, californium,
cadmium, mercury, holmium, titanium, erbium, thulium,
arsenic, antimony, ytterbium, selenium, tellurium, polonium,
40 lutetium, astatine, mixture thereof, including organic and
inorganic derivatives.
- 45 10. The fuel composition containing an ECS oxygenate
selected from MTBE, ETBE, DMC, DEC, methylal, ethylal,
methanol, ethanol, or mixture, and a compound selected from
[2-(cyclohexenyl)ethyl]triethoxysilane, cyclohexenyl

dimethoxymethylsilane, benzyltrimethylsilane, N-(3-
 (trimethoxysilyl)propyl)ethylenediamine, N-1-(3-
 (trimethoxysilyl)propyl)diethylenetriamine, N-(3-
 (trimethoxysilyl)propyl)ethylenediamine, 1-(trimethyl(silyl-
 5)pyrrolidine, triphenylsilanol, octamethyltrisiloxane,
 2,2,4,4,6,6-hexamethylcyclotrisilazane,
 hexamethylcyclotrisiloxane, hexamethyldisilane, 1,1,1,3,3,3-
 hexamethyl disilazane, hexamethyldisiloxane,
 hexamethyldisilthiane, allyltributylsilane,
 10 tetraalkylsilanes (e.g. tetraethylsilane, tetrabutylsilane,
 etc.), 3-aminopropyltriethoxysilane, benzytrimethylsilane,
 benzytriethylsilane, N-benzyltrimethylsilylamine, diphenyl-
 silanediol, dihexylsilanediol,
 (trimethylsilyl)cyclopentadiene, potassium methoxide,
 15 potassium ethoxide, potassium propoxide, potassium
 isopropoxide, potassium butoxide, potassium sec-butoxide,
 potassium tert-butoxide, potassium pentoxide, potassium
 tert-pentoxide, potassium phenoxide, potassium salt of
 20 acetic acid, potassium hydrogenphthalate, potassium
 hydrogensulfate, monopotassium acetylenedicarboxylic acid,
 potassium pyrophosphate, potassium dihydrogenphosphate,
 potassium benzoate, potassium chloride, potassium hexoate
 (potassium salt hexoic acid), potassium acetate, potassium
 diphenylphosphide, potassium trimethylsilonalate, potassium
 25 phthalic acid, P-aminobenzoic acid potassium salt,
 monopotassium L-aspartic acid, potassium naphthenate,
 potassium hexacyanoferrate (II), potassium hexacyanoferrate
 (III), potassium hexacyanocobalt II- ferrate, potassium
 hexacyanocobalt, potassium sodium ferricyanide, or mixture.

11. A composition comprising MMT and a compound
 selected from the group consisting of
 triemethoxymethylsilane, dimethylphosphite,
 ethoxytrimethylsilane, isobutyltriethoxy-silane,
 35 tetramethylsilane, dimethoxy-methyl-vinyl-silane,
 methyltriethoxysilane, 3-aminopropyl-triethoxysilane, 3-
 aminopropyl-trimethoxysilane, vinyltrimethoxysilane,
 diethoxydi-methylsilane, dimethoxydimethylsilane,
 vinyltris(2-butyldenamino-oxy)silane, tetraalkyloxysilanes,
 40 tetramethoxysilane, tetraethoxysilane, tetrapropylloxysilane,
 tetraisopropylsilane, tetraisobutylsilane, a
 dialkylphosphites, dimethyl-phosphite, diethylphosphite,
 dipropylphosphite, dibutylphosphite, di-tert-butylphosphite,
 trialkylphosphites, trimethylphosphite, triethylphosphite,
 45 tripropylphosphite, triisopropylphosphite, tributyl-
 phosphite), dimethylmethylphosphonate, diethylmethyl-phos-
 phonate, P-pyrophosphate, trimethyl-orthoacetate,
 trimethylorthovalerate, trimethylorthobutyrate,

trimethylortho-formate, alkyloxymethanes,
 tetraalkyloxymethanes, tetramethoxymethane,
 tetraethoxymethane, tetrapropoxymethane, tetraisopropoxy-
 methane, tetratert-butoxy-methane, potassium pryophosphite,
 5 trimethylorthoacetate, triethylorthoacetate, trimethylortho-
 butyrate, triethylortho-butyrate, trimethylorthovalerate,
 trimethylorthoformate, dimethoxymethane, diethoxyethane,
 tetramethoxymethane, triethoxymethylmethane, tri-
 methoxymethylmethane, tetraethoxymethane,
 10 trimethoxymethylethane, triethoxymethylethane, glacial
 acetic acid, acetic acide anhydride, (acetyloxy) acid acid,
 ethyl ester (acetyloxy) acetic acid, aminooxo acetic acid,
 aminooxo acetic acid hydrazide, ammonium acetate,
 15 acetoacetic acid, methoxyacetic acid, ethoxyacetic acid,
 methoxy ethyl ester of acetic acid, methoxy methyl ester of
 acetic acid, ethoxy methyl ester of acetic acid, ethoxy
 ethyl ester of acetic acid, propoxy methyl ester of acetic
 acid, oxoacetic acid, an alkylhydroxyesters of acetic acid,
 20 methylesterhydro-xyacetic acid, ethylesterhydroxy-acetic
 acid, propylesterhydro-xyacetic acid, alkyl acetates, methyl
 ester acetic acid, ethyl arsenate, ethyl arsenite, methyl
 ester of butanic acid, ethyl ester of butanic acid, 2-
 hydroxybutanic acid, 3-hydroxybutanic acid, 3-hydroxy-
 ethylester of butanic acid, 2-hydroxyethylester of butanic
 25 acid, diphenyl carbonate, dipropyl carbonate, ethylmethyl
 carbonate, dibutyl carbonate, tetranitromethane,
 triethylphosphine oxide, triethylphosphine oxide,
 triethylphosphine, diethyl-phosphinic acid,
 dimethylphosphinic acid, ethyl diethylphosphinic acid,
 30 diethylphosphonic chloride, dibutyl ester phosphonic acid,
 (1,1-dimethylethyl) phosphonic acid, ethenyl diethyl ester
 phosphoric acid, diethyl ethylphosphonate, ethyl
 dimethylester phosphonic acid, methyl dimethylester
 phosphonic acid, methyl monoethylester phosphonic acid,
 35 methyl monomethylester phosphonic acid, methyl-O,O-
 dimethylester phosphonothioic acid, diethyl ester phosphoric
 acid, dimethyl ester phosphoric acid, tributyl phosphate,
 ethylphosphate, trimethyl ester ester phosphoric acid,
 triethyl ester ester phosphoric acid, tripropyl phosphate,
 40 O,O,O,-triethyl ester phosphorothioic acid, diethylester
 phosphorous acid, dimethylester phosphorous acid, tributyl
 ester phosphorous acid, triphenyl ester phosphorous acid,
 O,O,S-tiethyl ester phosphorodithioic acid, 2-methyl-
 1,2,propanediol, 2-methyl-2-nitro-1,3,-propanediol, 2-
 45 methyl-2-propyl-1,3,-propanediol, 1-nitrate-1,2,propanediol,
 1,1',1'',1'''-[methanetetrayltetrakis(oxy)]-tetrakis propane,
 methyl propyl ether, isopropylmethyl ether, isobutyl methyl
 ether, ethyl propyl ether, propylmethyl ether, butyl methyl
 ether, 1,1'-[methylenebis(oxy)]bis[2-methyl-propane, 1-(1-

methylethoxy)-propane, 2,2',2"-[methyldidyne-tris(oxy)]tris propane, 1,1',1"-[methyldidyne-tris(oxy)]tris[2-methyl propane, 2-methyl-1-nitro propane, 2-methyl-2-nitro propane, hydracrylonitrile, 1,1,1-triethoxy-propane, 1,1,3-triethoxy-
5 propane, 1,1,1-trimethoxy-propane, 1,1,3-trimethoxy-propane, 1,1,1-trifluoro-3-nitro-propane, 2-pyrrolidinone, phenol, and mixture.

12. The composition of claim 11, wherein the compound
is selected from group consisting of trimethoxymethylsilane,
10 ethoxytrimethylsilane, isobutyltriethoxysilane, tetra-
methylsilane, dimethoxy-methyl-vinyl-silane,
methyltriethoxysilane, 3-aminopropyl-triethoxysilane, 3-
aminopropyl-trimethoxysilane, vinyltrimethoxysilane,
15 diethoxydimethylsilane, dimethoxydimethylsilane,
vinyltris(2-butyldenaminooxy)silane, tetramethoxysilane,
tetraethoxysilane, tetrapropylloxysilane,
tetraisopropylsilane, tetraisobutylsilane,
dimethylphosphite, dipropylphosphite, diethylphosphite,
dibutylphosphite, di-tert-butylphosphite, trialkylphosphites
20 trimethylphosphite, triethylphosphite,
triisopropylphosphite, tributylphosphite), dimethyl-
methylphosphonate, diethylmethylphosphonate, potassium pyro-
phosphite, trimethylorthoacetate, triethylorthoacetate, tri-
methylorthobutyrate, triethylorthobutyrate, tri-
25 methylorthovalerate, trimethylorthoformate, including
homologues, analogues, isomers, derivatives, and mixture
thereof.

The composition of claim 2, additionally containing a
glycol ether or a nitrogen containing compound.